

Study of accidents by vehicle type in Sri LankaAmal S Kumarage^{1*}, M D R P Jayaratne¹ and S M Wickremasinghe²¹ *Transportation Engineering Division, University of Moratuwa*² *Sri Lanka Police Department*

Accidents have steadily increased with time on Sri Lankan roads. While there are hosts of contributory factors, the rapidly increasing vehicle fleet is the primary reason. According to the accident statistics; 92,610 vehicles were involved in the 54,911 road accidents reported in 2002. Of this, 2,967 vehicles were involved in 2,024 fatal accidents. The main objective of this paper is to find out the most risky vehicle type that was involved in road accidents in terms of the number of vehicles, faulty rate and fatality rate etc.

Accident data for this study was obtained from the Traffic Police, Sri Lanka. Different kinds of statistics were used for the analysis. These include unadjusted factors such as the number of reported accidents and fatalities. Analysis was also done with respect to the type of vehicle, vehicle kms and population distribution in each province.

It is the light vehicle that is most frequently involved in road accidents. The car, bus and lorry are in the second, third and fourth place, respectively. However, in terms of injury accidents and fatal accidents these rankings change significantly. Here the motor cycle ranks in first place, followed by the bus, lorry and light vehicles in almost equal position. Bicycles were also involved in a high percentage of fatal accidents and it was around 12 per cent. Further analysis revealed that the Police have determined that 49,985 drivers were at fault in the 54,911 road accidents reported in 2002. Out of this, 2,041 drivers were reported at fault for causing fatal accidents. The drivers of light vehicles, lorry drivers, motor cycle riders & bus drivers were associated with causing over 73% of the fatal accidents. Another interesting analysis is that out of the 150 car drivers involved in fatal accidents, 85% were found to be at fault. Likewise, the faulty rates for each vehicle type for the years 2001 & 2002 have been calculated. Even though it was found earlier that the vehicle most involved in fatal accidents was the motor cycle, the faulty rate is much lower when compared to the other larger vehicles mentioned above. The larger vehicles appear to be more at fault than the smaller vehicles. More analysis was done on the distance travelled by these vehicles and the number of vehicles in each category in operation rather than on just the number of vehicles involved in accidents. Accordingly, the ranking of the most dangerous drivers change drastically and private bus drivers are in the first place. In general, light vehicles and cars are mostly involved in road accidents. However, the private buses are by far the most dangerous and lethal vehicles on our roads. Targeted enforcement programs and educational programs are urgently needed to arrest this situation. On the other hand, the motor cycle is found to be the most dangerous vehicle to use. Thus, emphasis on the use of safety equipment such as the use of the safety helmet and other general safety measures should be directed at this group of road users.

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